

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3721  
SOUTHERN PACIFIC COMPANY  
IN RE ACCIDENT  
NEAR WEBSTER, CALIF., ON  
OCTOBER 31, 1956

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## SUMMARY

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Date: October 31, 1956

Railroad: Southern Pacific

Location: Webster, Calif.

Kind of accident: Derailment

Train involved: Freight

Train number: Extra 4205 West

Locomotive number: 4205

Consist: 50 cars, locomotive crane, caboose

Speed: 47 m. p. h.

Operation: Signal indications

Tracks: Double; 0°10' curve; level

Weather: Clear

Time: 1:30 a. m.

Casualties: 2 injured

Cause: Improper handling of locomotive crane

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3721

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS  
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

SOUTHERN PACIFIC COMPANY

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December 31, 1956

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Accident near Webster, Calif., on October 31, 1956, caused  
by improper handling of a locomotive crane.

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REPORT OF THE COMMISSION<sup>1</sup>

CLARKE, Commissioner:

On October 31, 1956, there was a derailment of a freight train on the line of the Southern Pacific Company near Webster, Calif., which resulted in the injury of two train-service employees.

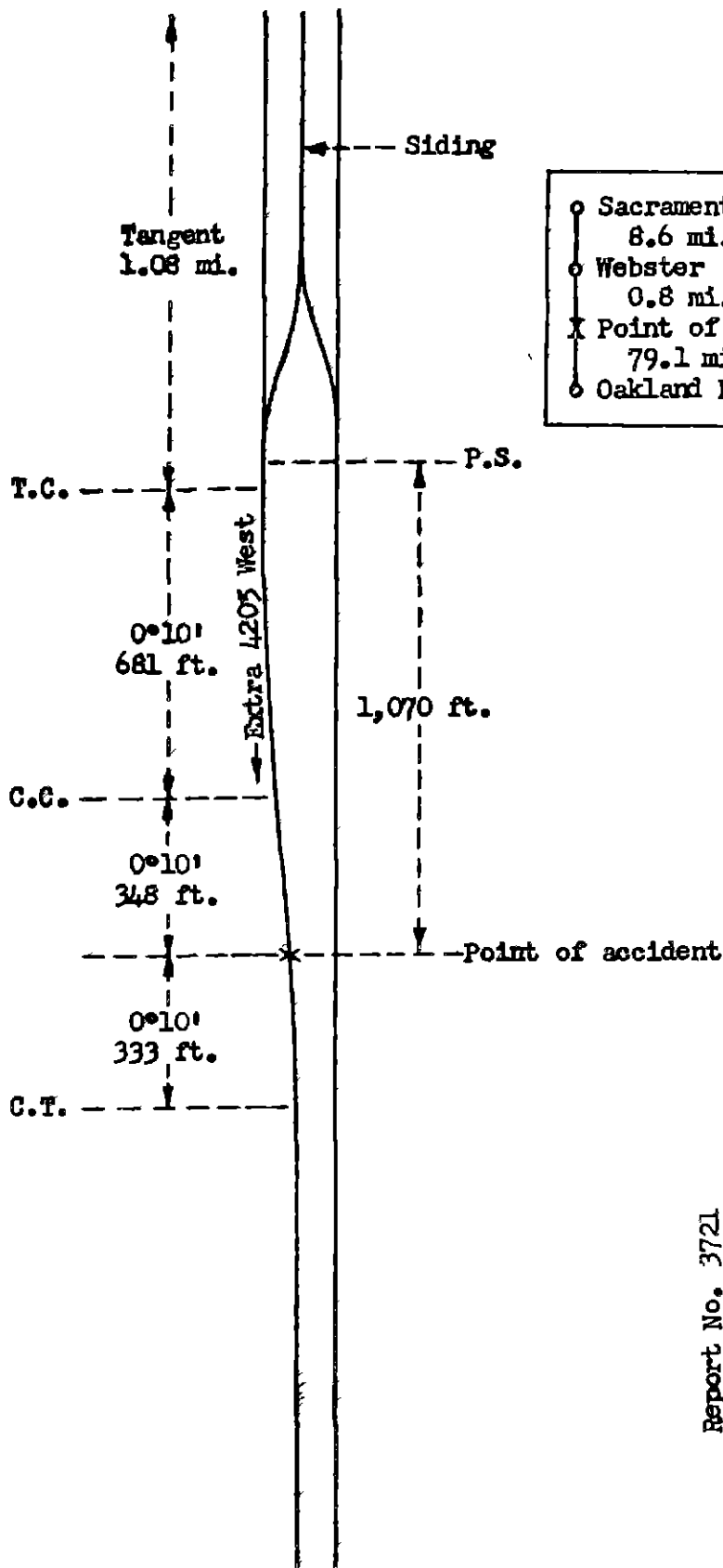
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Under authority of Section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.

→ To Sacramento, Calif. →

← To Oakland Pier, Calif. ←



○	Sacramento, Calif.
○	8.6 mi.
○	Webster
○	0.8 mi.
X	Point of accident
○	79.1 mi.
○	Oakland Pier, Calif.

Report No. 3721  
Southern Pacific Company  
Webster, Calif.  
October 31, 1956

### Location of Accident and Method of Operation

This accident occurred on that part of the Western Division extending between Sacramento and Oakland Pier, Calif., 88.5 miles. In the vicinity of the point of accident this is a double-track line, over which west-bound trains moving with the current of traffic are operated by signal indications. At Webster, 8.6 miles west of Sacramento, a siding is located between the two main tracks. The accident occurred on the westward main track at a point 1,070 feet west of the west siding-switch at Webster. From the east there is a tangent 1.08 miles in length and a reverse curve consisting of a 0°10' curve to the left 681 feet and a 0°10' curve to the right 348 feet to the point of accident and 333 feet westward. The grade is level.

This carrier's operating rules read in part as follows:

835. Yardmaster must inform conductor and conductor must inform engineer and chief train dispatcher when there is equipment in train requiring reduced speed.

Timetable special instructions provide that the speed of a train handling a locomotive crane with the boom disconnected and the light end forward must be restricted to 20 miles per hour.

### Description of Accident

Extra 4205 West, a west-bound freight train, consisted of steam locomotive 4205, 49 cars, locomotive crane 84, 1 car, and a caboose, in the order named. This train departed from Sacramento at 1:02 a. m., and while moving at a speed of 47 miles per hour, as indicated by the tape of the speed-recording device, the rear two cars, the locomotive crane, and the caboose were derailed at a point 1,070 feet west of the west siding-switch at Webster.

The forty-ninth car remained upright and stopped on the track structure of the westward main track. The locomotive crane, the rear car, and the caboose overturned to the north and stopped about 15 feet north of the track and parallel to it. The locomotive crane was badly damaged, and the other derailed equipment was somewhat damaged.

The conductor and the flagman were injured.

The weather was clear at the time of the accident, which occurred about 1:30 a. m.

Locomotive crane 84 is a self-propelled, Diesel-powered rotating crane with a lifting capacity of 30 tons. It is mounted on two four-wheel trucks. The length of the carriage over the end sills is 25 feet, the length of the boom is 56 feet 10 inches, and the weight is 206,000 pounds. At the time of the accident the boom had been detached and was loaded on the car ahead of the crane. The crane was moving with the light end forward.

### Discussion

Before the accident occurred the engineer of Extra 4205 West had not been informed that the train included equipment which required movement at reduced speed, and the train passed the west siding-switch at Webster at a speed of approximately 47 miles per hour. When the rear of the train was in the vicinity of the switch, the conductor and the flagman, who were in the cupola of the caboose, heard an unusual noise. The flagman looked ahead and saw that the rotary portion of the locomotive crane had swung out beyond the side of the carriage. He warned the conductor, and the conductor immediately opened the conductor's valve. The derailment occurred several seconds later.

After the accident occurred it was found that the rotary portion of the locomotive crane had swung out and struck a signal mast and a concrete telephone booth located on the north side of the westward main track at points, respectively, 2,370 feet and 105 feet east of the west siding-switch at Webster. Each of these structures was about 10 feet north of the center-line of the track. Marks on the track structure indicated that the crane had become derailed at a point 1,070 feet west of the switch and had then moved a distance of 273 feet to the point at which it stopped. Apparently the crane became derailed as a result of the unequal distribution of weight after the heavy end of the rotary portion swung out beyond the side of the carriage, and the other equipment was derailed as a result of the derailment of the crane.

Examination of the crane after the accident occurred disclosed that the rotary portion had been anchored by iron straps and channels. One channel had been used near each corner of the rotary portion of the crane. One end of each channel had been welded to the base of the rotary portion, and the opposite end had been welded to the floor of the carriage. Each channel measured 3/16 inch by 4 inches by 1-5/8 inches. A 3/8-inch by 2-1/4-inch strap had been looped through each side of the base at the front end of the rotary

portion. The loops had been welded, and the opposite ends of the straps had been welded to the floor of the carriage. There was no blocking between the rotary portion and the carriage, and without blocking the welds had been of insufficient strength to anchor the rotary portion securely. After the welds failed, the rotary portion had turned on the carriage.

The rules of the Association of American Railroads governing the movement in trains of rotary machinery on its own wheels with boom detached provide that, for machines weighing over 150,000 pounds, each end of the rotary portion must be securely anchored by the application of two 1-1/2-inch rods or the equivalent. The rods must be secured by nuts and washers. A hardwood timber must be bolted across the floor of the carriage under each end of the rotary portion, and a hardwood block must be driven between the top of the timber and the underside of the base of the rotary portion at each end of each timber. The blocks must be nailed to the timbers. The security of the rotary portion must be certified to by an authorized inspector who is required to attach to each side of the machine a prescribed form bearing certification that the machinery is properly secured. In the instant case, the rotary portion of the crane involved had not been secured in accordance with these requirements, and cards bearing certification that the machinery was properly secured had not been applied. The yardmaster did not notify the conductor that the train included equipment which required movement at reduced speed, and the conductor did not notify the engineer that the locomotive crane was in the train. When the accident occurred the train was moving 27 miles per hour in excess of the speed prescribed by timetable special instructions for the movement of equipment of this type.

Locomotive crane 84 was shipped from Feather Falls, Calif., and was billed to Vallejo, Calif., via the Feather River Railway, Western Pacific, and Southern Pacific. It was received in interchange by the Southern Pacific from the Western Pacific at Sacramento at 6:40 a. m., October 29, and was moved from Sacramento to Roseville, Calif., 17.7 miles east of Sacramento, the same day. It was assembled in the train of Extra 4205 West on October 30, and this train departed from Roseville at 11:15 p. m. The crane was inspected by car inspectors at the time it was received in interchange, before it was forwarded from Sacramento to Roseville, and before Extra 4205 West departed from Roseville. None of these inspectors reported the machine as being improperly secured or not properly carded.

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Cause

This accident was caused by the improper handling of a locomotive crane.

Dated at Washington, D. C., this thirty-first day of December, 1956.

By the Commission, Commissioner Clarke.

( SEAL )

HAROLD D. McCOY,  
Secretary.